BY ORDER OF THE COMMANDER ***GRAND FORKS AIR FORCE BASE***	***GRAND FORKS AIR FORCE BASE*** ***INSTRUCTION 91-102***

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Safety

MOVEMENT OF EXPLOSIVES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AF Policy Directive 91-2, Safety Programs, AFI 91-202, The US *Air Force Mishap Prevention Program* and AFMAN 91-201, *Explosives Safety Standards*. It establishes responsibilities and procedures for the movement of explosives by motor vehicle on Grand Forks Air Force Base (GFAFB). It applies to all organizations and contractors involved in the movement of explosives. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional's chain of command.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include: all references to 319 ARW and 319th Air Refueling Wing have been changed to 319 ABW and 319th Air Base Wing respectively.

1. Responsibilities:

1.1. GFAFB personnel and organizations responsible for receiving, shipping and on-base transportation of explosives cargo will comply with this regulation. Additional guidance governing the movement of explosives can be found in references listed in **Attachment 1**.

1.2. When contractual work to be performed requires explosives, GFAFB organizations utilizing authorized or designated contractors will notify the 319 ABW Weapons Safety Office. Notification will include the contractor's qualifications to transport explosives on GFAFB and the duration of the contractual obligations. POC for the contractors and the responsible contracting agencies will also be provided.

1.3. Organizations that receive or ship explosives will notify their carriers of the provisions of this instruction

1.4. DOD organizations will inspect military vehicles used for transport of all explosives. Vehicles used to move explosives internally will be inspected according to AFMAN 91-201, Chapter 8. Military vehicles used to move explosives off base will be inspected using DD Form 626. The fire department shall be notified when explosives arrive and will be in-transit on the installation.

1.5. **The 319 ABW/CP will:**

1.5.1. For Department of Energy (DOE) shipments, obtain team commander's name, ID, time of arrival and nature of the problem.

1.5.2. Notify 319 ABW/CC, MSG/CC and the Base Defense Operation Center (BDOC) of all DOE shipments arriving on Grand Forks AFB.

1.5.3. Monitor weather conditions for lightning at any time an explosive laden vehicle is being processed through the South Gate Search Barn. If lightning is within 5 nautical miles of base, notify the driver to evacuate the area to a minimum of 750 feet and seek shelter.

1.6. **The 319th Security Forces Squadron (SFS) will:**

1.6.1. Ensure Quick Response Checklists (QRCs) comply with this instruction and the Integrated Defense Plan (IDP 2010), and the BDOC.

1.7. **The 319th Logistics Readiness Squadron (LRS) will:**

1.7.1. Inspect all commercial vehicles used to transport shipments of HC/D 1.1, 1.2, 1.3 and over 1,000 rounds of 1.4 small arms ammunition/explosives consigned to or shipped by DOD agencies.

1.7.2. Inspect all arriving commercial explosive laden vehicles for DOD organizations or vehicles requesting SAFE HAVEN/REFUGE for safe loads prior to proceeding to off-load destination or parking in one of the SAFE HAVEN/REFUGE locations.

1.7.3. Inspect all DOD outbound explosives commercial shipments to ensure shipment meets DOT requirements.

1.7.4. Coordinate on SAFE HAVEN/REFUGE parking areas and with the MSA for temporary storage structures.

1.7.4.1. Ensure proper fire symbols are displayed for the HC/D of explosives at the parking areas/storage structure. Use DOT placards on vehicles as outlined in Subpart F of Title 49, CFR, and Part 172.

1.7.4.2. Ensure the 319 CES Fire Alarm Communication Center (FACC) is notified of changes to fire symbols at the parking areas/storage locations.

2. Procedures for Inbound and Outbound Explosives Shipments during Duty Hours:

2.1. Inbound Commercial Vehicles.

2.1.1. Drivers transporting explosives cargo HC/D 1.1, 1.2, 1.3, and 1.4 for DOD agencies onto GFAFB will enter through the South Gate. Use of the main gate to transport explosives will require prior coordination/approval by 319 SFS/S3 Operations Branch and the 319 ABW Weapons Safety Office.

2.1.2. Commercial vehicles will be inspected at the Commercial Visitor Control Center (CVCC), at ext 747-5177, outside the South Gate. The 319 SFS entry controller will notify 319 LRS by telephone and advise of the arrival, consignee, HC/D and Net Explosive Weight (NEW) of the explosives cargo.

2.1.3. Using DD Form 626, 319 LRS will conduct an incoming inspection of the vehicle for safe passage prior to its delivery destination or to the appropriate SAFE HAVEN/REFUGE parking area.

2.1.4. 319 LRS will call the FACC and provide the HC/D of explosives carried by the vehicle and its location when placed in SAFE HAVEN/REFUGE.

2.1.5. 319 LRS will escort the driver to the destination of the consignee or the approved SAFE HAVEN/REFUGE parking area. The explosive cargo will be off-loaded as required.

2.2. Outbound Commercial Vehicles.

2.2.1. All explosive shipments from DOD activities will be tendered only to motor carriers authorized to transport explosives and who comply with DOT and other safety regulations regarding the transportation of explosives.

2.2.2. 319 LRS will inform the BDOC and the FACC of HC/D of the vehicle contents.

2.2.3. The vehicle will be inspected by 319 LRS personnel for compliance with safety regulations before loading the explosives. DD Form 626 will be used to document the required inspection.

2.2.4. When the vehicle is loaded with HC/D 1.1, 1.2, or 1.3 explosives and ready to proceed off base, 319 LRS will provide an escort through the South Gate.

2.3. DOE Explosive Shipments.

2.3.1. Drivers of DOE vehicles loaded with explosives will enter GFAFB only through the .

2.3.2. All shipments of explosive cargo for DOE will be loaded only on approved DOE vehicles.

2.3.3. Inspections of the vehicle and instructions pertaining to the explosive cargo for the vehicle driver will be according to procedures established by DOE.

2.3.4. Drivers will depart the base through the South Gate.

3. Procedures for Explosives Shipments Arriving After Normal Duty Hours:

3.1. If vehicles with explosive cargo arrive outside normal duty hours (Monday through Friday 0700-1600), weekends or holidays, the Security Forces Squadron Installation Entry Controller on duty will tell the driver that:

3.2. Formal receipt of the material cannot be accomplished unless prior arrangements have been made with 319 LRS for DOD shipments (see IDP 2010 for further action). 319 LRS will notify 319 SFS of after duty hours delivery arrangements.

4. In-Transit Commercial Shipments:

4.1. There is an agreement between the US Commerce Department and DOD that when a mechanical problem or bad weather occurs, military bases will provide temporary parking for commercial vehicles laden with government explosives within the base's capability.

4.2. If such help is requested during duty hours, the following procedures will be followed:

4.2.1. Commercial vehicle drivers needing help will enter the base through the South Gate.

4.2.2. The vehicle will be inspected in the Commercial Visitor Control Center ext 747-5177 at the South Gate, prior to entry, and escorted to the Vehicle Holding Area inside the MSA to be parked until the driver and cargo can safely continue on to their destination. The Vehicle Holding Area will not be used for driver convenience at any time. The vehicle driver will notify the SFS Entry Controller of the problem and request permission for temporary storage of the vehicle and explosive cargo. The driver will provide the controller the HC/D of the explosives and the NEW.

4.2.3. The controller will relay the above information to the Command Post. The controller will then call the FACC dispatcher and provide the HC/D of the explosives, the NEW, and the destination.

4.2.4. The Command Post will activate the SAFE HAVEN/REFUGE checklist. Command Post personnel must ensure they receive sufficient information to determine required assistance prior to requesting permission from the 319 ABW/CC or CV.

4.3. 319 LRS will ensure trucks and loads can safely travel to the SAFE HAVEN or refuge parking areas. Commercial vehicles requesting SAFE HAVEN will be parked inside the Munitions Storage Area. At all times, the carrier maintains liability of his load until arrival at the shipment destination.

4.4. If SAFE HAVEN/REFUGE is provided to commercial carriers and a download is necessary to accomplish repairs, 319 LRS will escort the vehicle to a storage structure determined by Munitions Storage Area (MSA) personnel. MSA personnel will assist the carrier in off-loading and storing explosives if required. Upon completion of repairs, the carrier will upload from the storage structure and 319 LRS will perform an inspection of the load.

4.5. MSA personnel will be responsible to make the appropriate notifications to the 319 CES FACC when fire symbols are changed.

5. Transportation of Explosives within GFAFB:

5.1. Vehicles used by DOD organizations and their designated contractors will be inspected according to AFMAN 91-201, Chapter 8, before use.

5.2. Vehicles used by DOE and its designated contractors will be inspected according to DOE orders before use.

5.3. Vehicles transporting HC/D 1.1, 1.2, 1.3, or 1.4 within the Munitions Storage Area or to and from licensed storage facilities are not restricted to designated routes. Such movements will avoid built-up areas and key, mission-oriented facilities and equipment to the maximum extent possible.

6. DOT Placard and Fire Symbol Requirements:

6.1. All commercial, DOD, and designated contractor vehicles transporting explosives will display applicable DOT placards according to AFMAN 91-201, Chapter 8, and DOT Title 49, CFR.

6.2. When vehicles are parked at the SAFE HAVEN/REFUGE parking areas, the approved fire symbols will be posted and the FACC will be notified of HC/D at the location.

6.3. DOE vehicles involved in the courier shipment or transportation of explosives, Safe Secure Trailers (SSTs) and escort vehicles are exempt from placarding requirements.

7. Vehicle Requirements for Munitions Transportation:

7.1. Prior to use, inspect motor vehicles used to transport explosives to determine that:

7.1.1. Fire extinguishers are filled and are in good working order. A minimum of two (2) portable 2A:10BC or greater fire extinguishers are required for each vehicle transporting explosives.

7.1.2. Electric wiring is in good condition and properly attached.

7.1.3. Chassis, motor, pan, and underside of body is reasonably free of oil, grease, and fuel.

7.1.4. Fuel tank and feed lines are secure and not leaking.

7.1.5. Brakes, steering, lights, horn and windshield wipers are functioning properly.

7.1.6. Tires are properly inflated and free of defects.

7.2. Chock explosives loaded vehicles and trailers parked on any grade or ramp steep enough to cause vehicle to roll.

7.3. Refuel vehicles before loading explosives.

7.4. Do not operate vehicles containing explosives until the cargo is checked to ensure safe transportation. For on-base movements, explosives containers must be restrained, blocked, braced, tied down or otherwise secured to the vehicle to prevent movement and must not damage explosives or containers. Restraining devices may include chains and binders, cargo nets and straps.

7.5. Do not leave explosives-laden vehicles unattended unless they are in a properly designated area, such as the Munitions Storage Area.

TIMOTHY E. BUSH, Colonel, USAF
Commander, 319th Air Base Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 31-101, *Integrated Defense (FOUO),* 8 October 2009

AFI 91-202, *The US Air Force Mishap Prevention Program*, 5 August 2011

AFMAN 91-201, *Explosives Safety Standards*, 12 January 2011

Bureau of Explosives Tariff, BOE-6000-N

Defense Logistics Agency Directive (DLAD) 4145.41, *Packaging of Hazardous Material*

GFAFBI 91-201, *Explosives Safety Program*, 4 June 2008

GFAFB IDP 2010, *Integrated Defense Plan*

Title 49, Code of Federal Regulations, Transportation

Prescribed and Adopted Forms

Prescribed Forms: None

Adopted Forms:

AF Form 847, *Recommendation for Change of Publication*

DD Form 626, *Motor Vehicle Inspection (Transporting Hazardous Material)*

Abbreviations and Acronyms

AF—Air Force

AFB—Air Force Base

AFMAN—Air Force Manual

DOE—Department of Energy

DOT—Department of Transportation

FACC—Fire Alarm Communications Center

HC/D—Hazard Class and Division

MSA—Munitions Storage Area

POC—Point of Contact

SFCC—Security Forces Control Center

Terms

Accountable Forms— Forms that the Air Force stringently controls and which cannot be released to unauthorized personnel, since their misuse could jeopardize DOD security or result in fraudulent financial gain or claims against the government.

Administrative Change— Change that does not affect the subject matter content, authority, purpose, application, and/or implementation of the publication (e.g., changing the POC name, office symbol(s), fixing misspellings, etc.).

Approval Authority— Senior leader responsible for contributing to and implementing policies and guidance/procedures pertaining to his/her functional area(s) (e.g., heads of functional two-letter offices).

Authentication— Required element to verify approval of the publication; the approval official applies his/her signature block to authenticate the publication. The signature block includes the official's name, rank, and title (not signature).

Driver— Any person authorized and qualified to operate vehicles loaded with explosives.

Explosives— All ammunition, munitions fillers, demolition material, solid rocket motors, liquid propellants, cartridges, pyrotechnics, mines, bombs, grenades, warheads of all types, explosive elements of ejection and aircrew egress systems, air-launched missiles and those explosive components of missile systems and space systems and assembled kits and devices containing explosive materials. Explosives, explosive weight, net weight, and other like terms also refer to the fillers of an explosive item. Fillers may be explosive mixtures, propellants, pyrotechnics, chemical agents and other toxic substances.

Explosives Hazard Classification— Identifies the hazardous characteristics of explosive items by their assignment of established hazard categories governing storage and transportation. These categories are United Nations Organization (UNO) hazard class and division and Department of Transportation (DOT) class. Explosives are classified by their predominant hazard. Explosives classified as other than Hazard Class 1 will be treated as and stored as explosives except when the net explosive weight (NEW) is zero. Explosives used by USAF organizations must have a hazard classification assigned (interim or final). Final hazard classifications for explosives are listed in, to include predominant hazard classifications.

Hazard Class and Division:—**Class 1 Division 1 (1.1) Mass-detonating explosives** - Items in this division are principally blast hazards and may be expected to detonate when a small portion is initiated by any means. Examples: bulk explosives (TNT and C-4), bombs, demolition charges, and detonating cord).

Class 1 Division 2 (1.2) Non-mass detonating fragment producing explosives— Items in this division are principally fragmentation and blast hazards. The hazards may be either individual or in combination but do not mass detonate. Examples: 20mm high explosive incendiary cartridges, bomb fuses and 40mm high explosive cartridges. The effects produced by the functioning of Hazard Class/Division (HC/D) 1.2 items vary with the size and weight of the item. HC/D 1.2 is separated into three sub-divisions for purposes of setting quantity-distance criteria. This is based on the quantity of explosives expected to explode at one time when a stack of these items is involved in a fire.

Subdivision 1.2.1 are the most hazardous items in this subdivision— These items have a net explosives weight for quantity distance (NEWQD) greater than or equal to 1.60 lbs per item.

Subdivision 1.2.2— Items having an NEWQD less than or equal to 1.60 lbs per item.

Subdivision 1.2.3— These munitions do not exhibit any sympathetic detonation response in the stack test or any reaction more severe than burning in external fire test, bullet impact test, or slow cook-off test.

Class 1 Division 3 (1.3) Mass fire explosives— Items in this division burn vigorously and are principally a mass fire hazard. Examples: most rocket motors, pyrotechnic flares and signals.

Class 1 Division 4 (1.4) Moderate fire-no blast explosives— Items in this division present a minor fire hazard but no blast hazard. There is virtually no fragmentation or toxic hazard beyond the fire hazard clearance zone required for high-risk items. Examples: small arms ammunition without explosive projectiles, riot-control munitions, colored smoke grenades and most impulse cartridges.

Class 1 Division 5 (1.5) Very insensitive explosives— Items in this division, although mass detonating, are so insensitive that there is negligible probability of initiation or transition from burning to detonation in storage.

Class 1 Division 6 (1.6) extremely insensitive detonating substance (EIDS)— Items in this division have demonstrated, through test results that the mass and confinement effects of the ammunition case are negligible on the probability of initiation or transition from burning to detonation of the EIDS in transport or storage. Such ammunition, when intentionally initiated, will be incapable of transferring detonation to another.

Explosives Holding Area— A specific area used to accommodate explosives laden vehicles before movement to an explosive storage area or to their next destination.

Munitions Storage Area (MSA)— A designated area of facilities containing explosives used for the storage or warehousing of the unit's explosives stocks. Facilities include igloos, magazines, operating buildings, modules, revetments, and outdoor storage sites.

Net Explosive Weight (NEW)— The total quantity, expressed in pounds (lbs) of explosive material or high explosives equivalency in each item or round, used when applying quantity-distance criteria or other explosive safety standards. For example, the total NEW for an explosives laden vehicle is the sum total of the explosive content of all items loaded on the vehicle.

Net Explosives Weight for Quantity Distance (NEWQD)— The total quantity expressed in pounds of high explosives equivalency in each item or round to be used when applying quantity-distance (Q-D) criteria or other standards. The NEWQD is equal to the NEW unless testing has shown that a lower weight is appropriate for Q-D purposes. If the NEWQD is less than the NEW, the reason is usually that propellant or other substances do not contribute as much to the blast effect as the same amount of high explosives would.

Safe Haven— Designated areas to which noncombatants of the US Government's responsibility, and commercial vehicles and material, may be evacuated during a domestic or other valid emergency.

Vehicle Inspection Station— Designated area where all motor vehicles carrying ammunition and explosives will be inspected by an authorized inspector prior to entry of the installation.